

Managing Technical Personnel

September 28, 2009 3:00 – 5:00



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Managing Technical Personnel and TQP

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Chair, FTCP

Karen Boardman is the Director, Department of Energy (DOE), National Nuclear Security Administration (NNSA) Service Center. During her 24-year career with the DOE, she has served in a variety of positions including Manager of the Sandia Site Office, Deputy Manager for Programs and Technical Support at the former Albuquerque Operations Office, Director of the Weapon Programs Division, Deputy Assistant Manager for Safety and Security and Director of the Technical Analysis and Support Division. She has also served on details as the Acting Deputy Associate Administrator for Facilities and Operations, NNSA Headquarters and as the Acting Deputy Manager, Dayton Area Office.

On May 4, 2007, Ms. Boardman was appointed DOE Federal Technical Capability (FTCP) Chair by the Deputy Secretary, DOE.

Ms. Boardman is a graduate of the University of New Mexico in Civil Engineering.



Technical Qualification Program and Managing Technical Personnel

Karen Boardman
September 28, 2009

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Learning Objectives

- Explain the application of the Technical Qualification Program to ensure or improve technical competence.
- Describe the function, application, and relationship of the following programs, and explain how they are used to ensure safe operation of defense nuclear facilities:
 - Facility Representative
 - Safety System Oversight
 - Senior Technical Safety Manager
 - Nuclear Safety Specialist
 - Program/Project Manager

Learning Objectives



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- Describe the use and application of recruitment, selection and retention tools, processes and practices to ensure a technically competent workforce.
- Given a scenario or description of an organizational competency situation, demonstrate the ability to identify critical capabilities, leverage Department resources, and implement a succession plan for key technical positions.

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Federal Technical Capability Panel (FTCP)



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- Develop and maintain a technically competent workforce to accomplish the DOE mission in a safe and efficient manner (DOE M 426.1-1A)
- Oversee the Technical Qualification Program (TQP)
- Conduct periodic assessments of the effectiveness of the TQP using internal and independent experts
- Provide recommendations to senior Departmental officials regarding DOE technical capability
- <http://www.hss.energy.gov/deprep/ftcp>

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Elements of a Technical Qualification Program (TQP)



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- Demonstration of competence
- Competency levels
- Plans and procedures
- Qualification tailored to work activity
- Credit for existing qualification programs
- Transportable
- Measurable

TQP Challenges



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- Qualifications and training of personnel responsible for nuclear safety
- Consistency and transportability of qualification programs
- Recruit and maintain a technically capable workforce
 - Next 5 yrs~1/2 DOE workforce eligible to retire
 - Workforce analysis and FTE ceilings
 - Intern Programs



Technical Qualification Program (TQP)

- The TQP applies to DOE technical employees whose duties and responsibilities require them to provide assistance, guidance, direction, oversight or evaluation of contract activities that could impact the safe operation of a defense nuclear facility.
- Key positions include:
 - Facility Representatives (FR)
 - Safety System Oversight (SSO)
 - Senior Technical Safety Managers (STSM)
 - Nuclear Safety Specialist (NSS)



TQP Requirement for Safety Management Program Oversight

Employees responsible for technical oversight of nuclear facility safety management programs must complete:

- **General technical base qualification standard**
- **Functional area qualification standard related to the safety management program they are assigned to oversee**
- **Site and facility qualification requirements for oversight of the respective safety management programs**



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Functional Area Qualification Standards

- Aviation Manager
- Aviation Safety Officer
- Chemical Processing
- Civil/Structural Engineering
- Construction Management
- Criticality Safety
- Deactivation and Decommissioning
- Electrical Systems and Safety Oversight
- Emergency Management
- Environmental Compliance
- Environmental Restoration

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Functional Area Qualification Standards

- Facility Maintenance Management
- Facility Representative
- Fire Protection
- General Technical Base
- Industrial Hygiene
- Instrumentation and Control
- Mechanical Systems
- NNSA Package Certification Engineer
- Nuclear Explosive Safety Study
- Nuclear Safety Specialist

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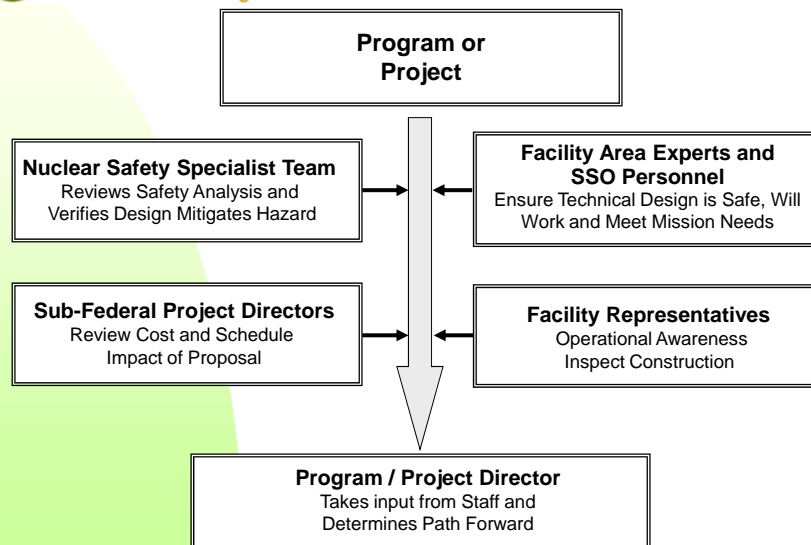


Functional Area Qualification Standards

- Occupational Safety
- Quality Assurance
- Radiation Protection
- Safeguards and Security
- Safety Software Quality Assurance
- Senior Technical Safety Manager
- Technical Program Manager
- Technical Training
- Transportation & Traffic Management
- Waste Management
- Weapons Quality Assurance



Example of Key Technical Positions



Effective Use of TQP



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- All levels of management must be actively involved
- Personnel must be assigned to the right position/area
- Qualification process and requirements must be valid and adequate for site-specific programs and systems

Corporate Accreditation of TQPs



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- Enables both Headquarters and field organizations to demonstrate that they have implemented an effective technical qualification program for defense nuclear facilities.
- Accreditation of TQP is **voluntary**

Corporate Accreditation Process



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Process is based on the INPO accreditation model and includes:

- Development and implementation of a TQP that meets the requirements outlined in the *Federal Technical Capability Manual*
- A comprehensive self assessment of the TQP
- Evaluation of the requesting organization's TQP by an onsite accreditation review team
- A recommendation to the Deputy Secretary of Energy regarding accreditation of the program by an independent TQP Accreditation Board
- A determination by the Deputy Secretary regarding accreditation

Pilot Accreditation Process



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- Conducted for the Y-12 Site Office from 2/24/06 to 7/20/06
- Y-12 Site Office TQP granted accreditation by the Deputy Secretary of Energy in October 2006
- Conducted at the NNSA Service Center and Sandia Site Office from June 23 – 27, 2008
- NNSA Service Center and Sandia Site Office TQP granted accreditation by the Deputy Secretary of Energy in November 2008

Pilot Accreditation Results



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- The process works
- Y-12 Site Office, NNSA Service Center and Sandia Site Office already had a mature TQP and were performing self assessments required by the TCP Manual
- The on-site accreditation review team validated TQP strengths and weaknesses identified in their self-assessment, but found additional weaknesses
- None of the TQP weaknesses were judged as preventing the TQP from performing the intended functions
- YSO, NNSA Service Center and Sandia Site Office have implemented a corrective action plan to address identified areas for improvement

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TQP Challenges



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Workforce Analyses



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- Senior managers must periodically conduct **workforce analyses** of their organizations and develop staffing plans that identify critical technical capabilities and positions that ensure safe operations at defense nuclear facilities.
- Analyses coordinated by the respective FTCP Agent
- The FTCP reviews the staffing plans and annually provides an assessment of the state of critical technical capability within DOE to the Secretary in the form of an Annual Report.

Identifying Skills and Competencies



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- Do we have the required (numbers and skills) technical capabilities/capacity to perform our current workload? Identify the gaps.
- What technical capabilities/capacity (numbers and skills) do we need now (if gaps exist) and in the future? When do we need them? If we have them, are we going to lose them (i.e., retirement)?
- Do we need these technical capabilities/capacity for a long period of time (i.e., needs to be an FTE) or do we need these capabilities/capacity for a short period of time (i.e., could be contracted or borrowed)?

Staffing Plan Elements



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- Critical safety needs and actions taken to address recruitment and deployment issues;
- Projected staffing needs for technical positions, including FR and SSO positions; and
- Methods such as Excepted Service Authorities, redeployment, Career Intern Program, and the respective leadership development.

Criteria for Critical Positions



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- The position must be technical in nature, with responsibilities related to the safe operation of defense nuclear facilities....*and*
- The critical capabilities associated with the position must represent a specialized skill set that could not typically be replicated in 90 days using formal training or external recruiting....*and*
- The position must require a qualification or certification unique to the DOE mission (e.g., FR and SSO)....*or*
- Proficiency in the position must require critical capabilities that can only be obtained through a lengthy period of on-the-job training (e.g., longer than 6 months).

Leveraging Resources



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- Document needs clearly in accurate position descriptions and statements of work that include required technical competencies and skill levels.
- Can short term (current and future) needs be bought with contractor support, detailed from other site offices, or provided by the consolidated business center, etc.?
- Canvass current workforce for untapped technical capabilities.
- Grow your own.
- Recruit creatively.

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“Do’s and Don’ts” of Recruitment and Selection



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Creative Federal Recruiting (look beyond “career” appointments)

- Term — 1 to 4 year competitive appointment
- Temporary Limited — competitive appointment up to 1 year
- Internships, Fellowships, and Student Employment
- Excepted Service — competitive or noncompetitive appointment
- Bonuses and Incentives
 - Recruitment — up to 25% of base salary
 - Relocation — up to 25% of base salary
 - Retention (to retain essential staff) — up to 25% of base salary
 - Higher pay-setting
 - Non-monetary incentives

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“Do’s and Don’ts” of Recruitment and Selection (cont.)



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Creative Federal Recruiting (cont.)

- Advertise far and wide.
 - Open houses, job fairs (e.g., US Service Academy Career Conferences), career days, paid advertising in newspapers, professional journals and websites, colleges, societies, professional/accrediting organizations, stakeholders, recruiting firms, non-profit employment services, and OPM sources.
 - Leave advertisements open for longer durations — you never know when someone will be looking for a new opportunity.

Succession Planning



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- Ensures that there are highly qualified people in all positions — not just today, but tomorrow, next year, and five years from now.
- With good succession planning, employees are ready for new leadership roles as the need arises, and when someone leaves, a current employee is ready to step up to the plate.
- Typically targets only key leadership positions. In our business, it is important to include key positions in a variety of job categories. (FR, SSO, NSS, STSM, etc.)

Elements of Succession Planning



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- Understand the organization's long-term goals and objectives (e.g., new missions or missions phasing out).
- Determine workforce trends and predictions.
- Identify critical technical positions.
- Identify the key competencies associated with critical technical positions.
- Identify potential candidates for critical technical positions.

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Elements of Succession Planning (cont.)



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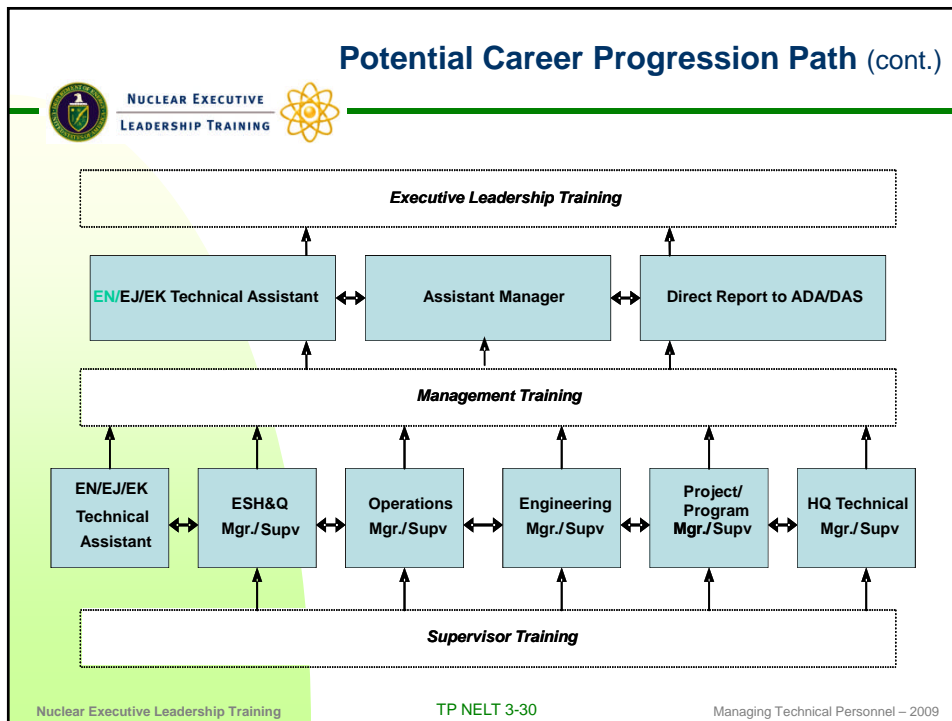
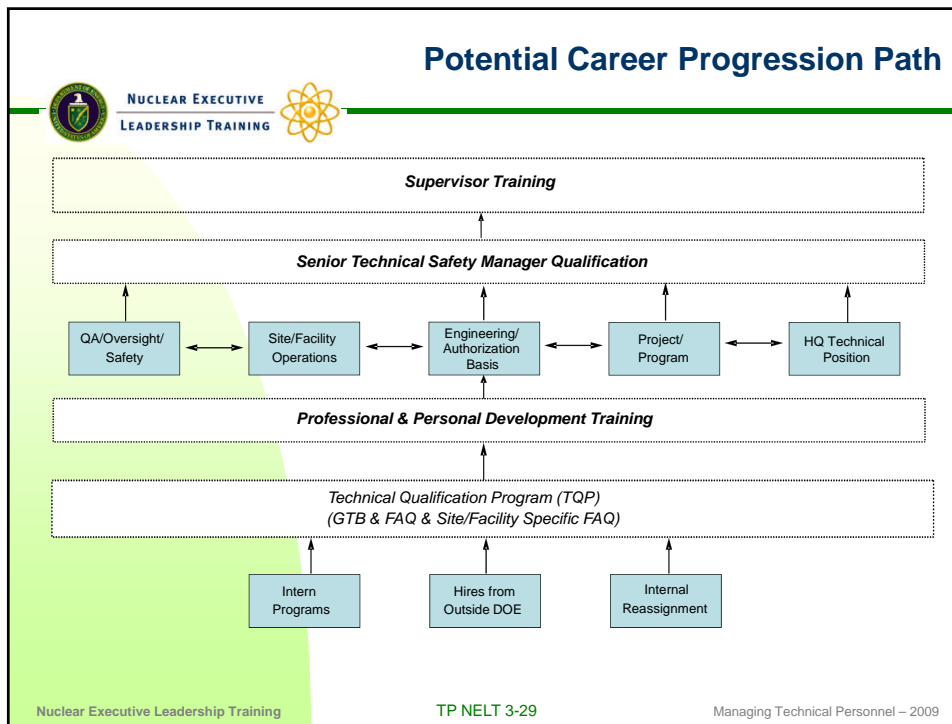


- Identify gaps in current employee and candidate competency levels.
- Establish candidate development plans (training, rotational assignments, coaching, mentoring, etc.).
- Work closely with all involved parties.
- Document the plan, communicate the plan, and review/update it periodically.
- Establish internship positions to retain critical knowledge and competencies

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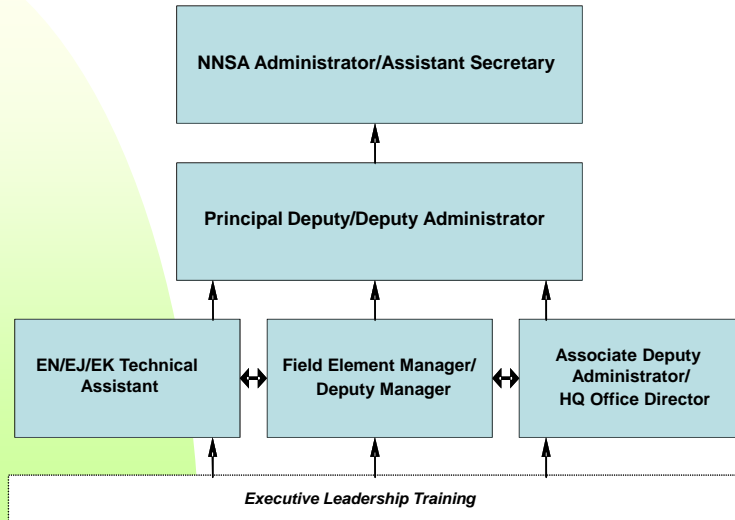
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Potential Career Progression Path (cont.)



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